Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1, 4, 7-10, 12-16, 18, and 20-23 are pending in the application, with claims 1, 7, 12, and 16 being the independent claims. Claims 2, 3, 5, 6, 11, 17, and 19 were previously cancelled without prejudice to or disclaimer of the subject matter therein. Claims 1, 4, 7, 9, 10, 12-16, and 20-23 are sought to be amended. Applicants reserve the right to prosecute similar or broader claims, with respect to the cancelled and amended claims, in the future. Support for the amendments is found in the instant specification at least at, for example, paragraphs [0020], [0022], [0026] - [0029] and [0032] and FIGs. 2 and 3 of U.S. Publication No. 2002/0077981 A1 to Takatori *et al.* These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Statement of Substance of Examiner Interview

Further to the Interview Summary mailed January 28, 2010, Applicants submit the following Statement of Substance of Interviews conducted between the Examiner and Applicants' representative, Randall K. Baldwin, on January 25, 2010 and February 4, 2010.

Applicants' representative gratefully acknowledges the courtesies extended by the Examiner in granting a telephone interview on January 25, 2010. In that interview, the Examiner confirmed that the Office Action issued on January 21, 2010 (PTO Prosecution

File Wrapper Paper No. 20100113) is a non-final Office Action as indicated in item 2b)

in the Office Action summary issued on January 28, 2010 (PTO Prosecution File

Wrapper Paper No. 20100126).

In the telephonic interview of February 4, 2010, the Examiner clarified comments

regarding his interpretation of the teachings of the applied references. In particular, the

Examiner clarified his comments regarding claims 1, 7, 12, and 16 and the teachings of

Alfano, Golestani, and Ranganathan. Applicants' representative discussed distinctions

between claims 1, 7, 12, and 16 and the applied references. Applicants' representative

also discussed with the Examiner suggested claim language to clarify the aforementioned

distinctions between the applied references and the claims, but no specific agreement

was reached. Applicants' representative additionally discussed with the Examiner

proposed amendments to claims 12-15 and 22, and the Examiner agreed that the

proposed amendments would overcome the rejection under 35 U.S.C. § 101.

The substance of the discussion and arguments in the telephone interview is

included in the present remarks.

Rejection under 35 U.S.C. § 101

At page 3 of the Office Action the Examiner rejected claims 12-15 and 22 under

35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter.

As discussed during the aforementioned February 4, 2010 interview, although

Applicants believe claims 12-15 and 22 recited a statutory class as previously pending in

the application, Applicants have clarified claims 12-15 and 22 merely in order to

expedite prosecution without conceding the propriety of the rejection.

Claims 12-15 and 22 as amended herein are directed to articles of manufacture, and therefore all recited features are tied to a statutory class. Accordingly, Applicants respectfully request that the rejection of these claims be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 103

At page 4 of the Office Action the Examiner rejected claims 1, 4, 7-9, 12-13, 15-16, 18 and 20-23 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent Number 6,094,423 to Alfano *et al.* ("Alfano") in view of U.S. Patent Number 6,965,943 to Golestani ("Golestani"), and further in view of U.S. Patent Number 5,931,961 to Ranganathan *et al.* ("Raganathan"). Applicants respectfully traverse these rejections for the reasons stated below.

Without acquiescing to the propriety of the rejections, and merely to expedite prosecution, Applicants have amended claims 1, 4, 7, 12-16, and 20-23.

Independent Claims 1, 7, 12, and 16

Claims 1, 7, 12, and 16 recite features that distinguish over the applied references. For example, claim 1 as amended herein recites, *inter alia*:

> *select an appropriate packet size for transmission data* to be packetized, the appropriate packet size being selected *according to:*
> *the response indicating the packet sizes that are recognizable by the destination communication device*; or
> a retransmission request that occurs *in response to detecting a communication error or traffic congestion between the wireless communications device and the destination communication device*, the retransmission request occurring *while packets are being transmitted, wherein the appropriate packet size is smaller than the packet sizes that are recognizable by the destination communication device*[.]

Also, for example, claims 7, 12, and 16 as amended herein recite, using respective language, among other features, *"selecting a packet size according to: the response indicating the packet sizes that are recognizable by the destination communication device; or a retransmission request that occurs in response to detecting a communication error or traffic congestion between the . . . device and the destination communication device*, the retransmission request occurring *while packets are being transmitted, wherein the appropriate packet size is smaller than the packet sizes that are recognizable by the destination communication device.*

The Examiner appears to incorrectly equate the scheme of transitioning from a transaction protocol to a connection-oriented protocol, disclosed in Alfano, with the above-noted "select[ing] an appropriate packet size" recited in claims 1, 7, 12, and 16. Applicants respectfully disagree with the Examiner's statements.

Alfano teaches that a transaction protocol, in comparison to a connection-oriented protocol, "has a low implementation and operating cost." (Alfano, col. 2, lines 34-36.) However, Alfano notes the use of a transaction protocol is not always possible since transaction protocols are "designed around a maximum amount of data being allowed to be transmitted in each message exchange." (Alfano, col. 2, lines 31-34.). As such, Alfano teaches the use of a connection-oriented protocol is required in instances where the maximum amount of data to be transmitted exceeds this limit of a transaction protocol, i.e., the maximum transfer unit (MTU) size. Alfano teaches "an ideal solution" is performed by using the transaction protocol in cases where the transaction protocol is sufficient to carry messages "and a connection-oriented protocol *in all other cases.*" (Alfano, col. 2, lines 50-54) (emphasis added).

Alfano teaches that transaction protocols simply include "a short request for information by an initiator and a response to the request from the recipient." (Alfano, col. 2, lines 15-17.) Therefore, according in Alfano's system, only a single message is transmitted from both the initiator and the recipient in a single transaction. This is taught at lines 53-60 of column 5 of Alfano:

> The processor is preferably programmed to *initiate a* wireless *request* to a server (or receive a wireless request from a server) *using a transaction protocol and* then to *continue communications using the transaction protocol if a response* from the server (or from the communication device 50) *is less than a maximum transfer unit size* and *else* subsequently *communicate using a connection oriented protocol upon determining* that *the response* from the server (or from the communication device 50) *is greater than the maximum transfer unit size* by detecting receipt of data packets of a segmented response from the server (or from the communication device 50).

(emphasis added).

Thus, in Alfano's system, if the response to a request sent by an initiator is greater than a single maximum transmission unit (MTU), the responder (i.e., the recipient) will segment the message and eventually begin to execute a connection-oriented protocol.

In summary, in Alfano, the transition from a transaction protocol to a connection-oriented protocol occurs when a message to be transmitted has a message length greater than a *single* MTU. As a result, the message is segmented into smaller message sizes and transmitted via a connection oriented protocol.

However, Alfano fails to teach or suggest that the message segments are selected in response to *detecting a communication error or traffic congestion between the . . . device and the destination communication device . . .* occurring *while packets are being transmitted*, as respectively recited in claims 1, 7, 12, and 16. Rather, in Alfano the message segments are at most selected to be less than a single MTU, which disclosure

does not teach or suggest *selecting a packet size according to . . . detecting a communication error or traffic congestion between the . . . device and the destination communication device . . .* occurring *while packets are being transmitted*, as recited, using respective similar language, in claims 1, 7, 12, and 16.

Golestani does not cure the deficiencies of Alfano noted above. Golestani is stated by the Examiner to teach "wherein a receiving size (apparatus) requests the transmitting side to transmit data *a transmission rate* that is recognizable by the received side." (Office Action, page 6) (emphasis added). Golestani discloses "[a] window scheme for end-to-end congestion control [that] employs an arrangement whereby the amount of outstanding data for a given session is limited to *a maximum number of packets* . . . [t]his number is *referred to as the window size.*" (Golestani, col. 2, lines 30-33). Golestani further discloses that "[i]nformation about the *recommended window size, or rate of transmission,* is then communicated to the transmitting end apparatus of the session through a feedback path that is part of another session (from the receiving end apparatus serving as the transmitting end apparatus of this other session)" and that "the receiving end develops a recommendation of the *optimum window size or transmission rate* and transmits that to the transmitting end." (Golestani, col. 3, lines 14-22) (emphasis added).

The window size or rate of transmission discussed in Golestani refers to a maximum number of packets. As discussed during the aforementioned February 4, 2010 interview, Applicants respectfully submit that the transmission rate disclosed in Golestani does not teach or suggest the recited appropriate packet size. However, even assuming for the sake of argument that the Examiner's characterization of Golestani's transmission rate teaches the recited selecting an appropriate packet size, which

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Applicants do not acquiesce to, Golestani does not provide the missing teaching or suggestion of Alfano with respect to claims 1, 7, 12, and 16, as noted above. Therefore, the allegedly obvious combination of Alfano and Golestani cannot be used to establish a *prima facie* case of obviousness for claims 1, 7, 12, and 16.

With reference to previously pending claim 1, the Examiner acknowledges that "[b]oth Alfano and Golestani fail to disclose if a retransmission request occurs while packets are being transmitted, determine a smaller appropriate packet size than the previously selected most appropriate packet size." (Office Action, page 6). Rather, the Examiner relies on Ranganathan to cure the acknowledged deficiencies of Alfano and Golestani. However, even assuming this statement by the Examiner is correct, the Examiner does not use Ranganathan to cure, nor does Ranganathan cure, the deficiencies of Alfano and Golestani noted above.

Ranganathan is used on page 6 of the Office Action to teach "if a retransmission request occurs while packets are being transmitted, determine a smaller appropriate packet size than the previously selected most appropriate packet size." Even assuming *arguendo* that the Examiner's interpretation of Ranganathan is correct, which Applicants do not acquiesce to, Ranganathan does not provide the missing teaching or suggestion with respect to ***selecting a packet size according to . . . detecting a communication error or traffic congestion between the . . . device and the destination communication device . . .*** occurring ***while packets are being transmitted***, as recited, using respective similar language, in claims 1, 7, 12, and 16.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. § 103(a) rejection of claims 1, 7, 12, and 16 and pass these claims to allowance. At least based on their respective dependencies to claims 1, 7, 12,

and 16, claims 4, 8-10, 13-15, 18, and 20-23 should be found allowable over the applied

references, as well as for their additional distinguishing features. See *In Re Fine*, 837

F.2d 1071 (Fed. Cir. 1988) and M.P.E.P. § 2143.03.

Dependent Claims 20-23

For example, claims 20-23 are also patentable over these applied references for

their additional distinguishing features. With regards to previously pending dependent

claims 20-23, the Examiner asserts, which Applicants do not acquiesce to, that "wherein

the appropriate packet size is further selected according to current traffic congestion of a

communication media that the transmission data is to be transmitted over" is disclosed in

lines 24-36 of column 6 of Ranganathan, which state:

> A large-sized TCP packet is fragmented into smaller size packets
> by routers automatically. Part of the fragmentation instructions lie within
> the fields of the header and add to TCP overhead. Further, TCP is
> "reliable" in that while it does not guarantee transfer of data, it does
> guarantee echoing back an error message indicating that the data was
> unable to be transferred and why. TCP fragments large packets, re-
> transmits lost packets and acknowledges when packets are ultimately
> unable to be transferred. UDP, on the other hand, includes none of these
> features, and consequently has a header with fewer fields and less
> overhead. If a UDP packet is dropped or corrupted, the packet is lost
> forever.

The cited portion of Ranganathan discusses automatically fragmenting a large-

sized TCP packet into smaller sized packets. However, Applicants submit that wherein

the selecting the appropriate packet size comprises selecting according to one or more of

a status of radio waves received by the computing device or current traffic congestion of

a communication medium that the transmission data is to be transmitted over, as recited,

using respective similar language, in amended claims 20-23 is not disclosed in above-

quoted portion of Rangathan, or in other portions. Therefore, the applied references cannot be used to establish a *prima facie* case of obviousness for claims 20-23.

Claims 10 and 14

At page 13 of the Office Action the Examiner rejected claims 10 and 14 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Alfano in view of Golestani and Ranganathan, and further in view of U.S. Patent Number 6,307,867 to Roobal *et al.* ("Roobal"). Applicants respectfully traverse these rejections for the reasons stated below.

At page 14 of the Office Action the Examiner states, which Applicants do not acquiesce to, that Roobal discloses "a method where the receiver generates a retransmission request to the sending device requesting a different packet size to the receiver." However, Roobal is not stated to teach, nor does Roobal teach, at least the above noted distinguishing features of claims 7 and 12. Thus, as Roobal cannot be used to cure the deficiencies of Alfano, Golestani, and Ranganathan, the applied references cannot be used to establish a *prima facie* case of obviousness for claims 7 and 12.

At least based on their respective dependencies to claims 7 and 12, claims 10 and 14 should be found allowable over the applied references, as well as for their additional distinguishing features.

Accordingly, Applicants respectfully request that the rejections of claims 1, 4, 7-10, 12-16, 18, and 20-23 be removed and that these claims be passed to allowance.

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Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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